

Attorney's Docket No.:11227-004001

Remarks

Reconsideration and allowance of the above reference application is respectfully requested.

Claim 16 is amended to depend from the preceding claim 15.

Claim 17 stands rejected under 35 USC 112, second paragraph, as allegedly being indefinite. In response, claim 17 is amended to depend from claim 14, to obviate the lack of antecedent base.

Claims 1, 3-15, 17-21, 23-27 stand rejected under 35 USC 103 as allegedly being unpatentable over Sharples in view of Tisone, et al. This contention, however, is respectfully traversed.

First, with all due respect, it is respectfully noted that the combination of Sharples in view of Tisone, et al. would not be operatively made by a person having ordinary skill in the art. Sharples relates to a liquid chromatography mass spectrometer (LCMS), and more specifically with a slotted retaining plate for use within a tubular reactor that is used in an LCMS. In contrast, Tisone, et al defines a conventional high-speed fluid dispenser that dispenses patterns of reagent onto a substrate or other surface. The two fields, chromatography/mass spectrometry, and fluid dispensing, have no relationship whatsoever. A person having ordinary skill in the art would not be motivated to take aspects of one of these

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fields into another field. Moreover, these fields are entirely non-analogous. Therefore, a person having ordinary skill in the art would not make the hypothetical combination of Sharples in view of Tisone, et al.

Even assuming that a person having ordinary skill in the art would be aware of these references, and would be able to make the combination, the hypothetical combination still would not teach the combination that is suggested by the office action. The rejection alleges that Sharples teaches a jetting tube 40 that is formed of a glass capillary with an orifice used for dispensing liquid at one end, and having an aperture at the other end. The capillary 40, that the rejection characterizes as a jetting tube, is simply a conduit between reactors. The conduit 40 is attached to a separate reactor 42. That separate reactor 42 includes packing material 114. The packing material, however, is not a retaining means, it is simply a packing material. Its function is not to absorb components from a liquid stream passing down the reactor, rather it simply slows down the passage of the liquid "to ensure a uniform velocity profile across the column" (see column 5, lines 47 to 64). Hence, there is no retaining means within the conduit 40, and hence no retaining means associated with the item referred to as the jetting tube.

To the extent that the rejection attempts to equate the

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reactor 42 itself to a jetting tube, it is respectfully suggested that the specification of Sharples does not disclose the reactor 42 as being the type of capillary to that a person skilled in the art could apply to a transducer to form a piezo-electric dispensing device. In fact, the reactor 42 has a diameter which is much too large to function as a piezo-electric dispensing device, particularly, one for a micro dispensing apparatus.

Moreover, the conduit 40 is not identified by Sharples as being a jetting tube.

However, even if it could be considered as a jetting tube, its orifice would dispense liquid directly onto the retaining means 114. Claim 1 requires the transducer being disposed between the retaining means and the orifice of the jetting tube.

Tisone, et al. does not make up the missing teaching which is described above as being missing from Sharples. Tisone, et al describes a conventional fluid dispensing device. Tisone, et al does not disclose incorporating the retaining means in the dispensing apparatus thereof. The rejection describes how 332 provides a pressure pulse to cause the liquid to move. However, this does not teach or suggest such a retaining means.

Therefore, even assuming that one having ordinary skill in the art could make the hypothetical combination of Sharples in view of Tisone, et al, this hypothetical combination still would

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not teach or suggest the subject matter of claim 1 which recites a "retaining means for collecting, capturing or at least temporary retaining one or more compounds from liquid contacting that means in the apparatus". The hypothetical combination of references would not teach or suggest a retaining means that retains the compounds from the liquid contacting that means. Therefore, claim 1 should be allowable along with claims 3-12 which depend therefrom, directly and indirectly.

Claim 2 defines a jetting tube, a transducer, and retaining means, and that the retaining means forms part of and modifies the inner surface of the jetting tube. As described above, the hypothetical combination does not teach or suggest such a retaining means, and therefore claim 2 should be additionally allowable for these reasons.

Claim 2 was rejected over Ledford in view of Tisone, et al. Ledford teaches a capillary quick disconnect for a chromatography column. Again, the chromatography column of Ledford would not be operatively combined by one having ordinary skill in the art along with the micro dispensing apparatus of Tisone, et al. Therefore, one having ordinary skill in the art would not make this hypothetical combination. Even assuming that the combination were made, moreover, it would still not teach or suggest the subject matter of the present system. Claim 2 requires a jetting tube that dispenses liquid, a

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transducer, that applies a pressure pulse to the jetting tube that causes it to move, and retaining means that retains the compounds, and where the retaining means modifies the inner surface of the jetting tube. The rejection alleges that the 222 is the jetting tube. Page 5 alleges the column 1 lines 19-23 described modifying the inner surface of the jetting tube. However, this cited section simply describes the stationary phase of the analyte coating the inner wall. It teaches nothing about any kind of means that adjusts the inner surface of a tube of the type claimed. Moreover, even if the hypothetical combination was made in exactly the way suggested by the official action, this still would not teach or suggest the claimed system.

Claim 13 requires a jetting tube, and retaining means, which is not shown by the cited prior art, as described above. Claim 13 also defines the means for providing liquid to or from the jetting tube to wash the jetting tube. Nowhere is there anything in Sharples in view of Tisone, et al. that teaches or suggests washing the jetting tube. Therefore, claim 13 should be allowable.

The indication that claim 15 represents allowable subject matter is appreciatively noted. This claim has been amended into independent form, and is retained.

Claim 23 similarly specifies the jetting tube, capturing

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compounds from the jetting tube, and washing the jetting tube. As described above, this is nowhere taught or suggested by the cited prior art. Claim 33 also defines a jetting tube, transducer and retaining means, and should be allowable for reasons discussed above. Claim 37 requires a jetting tube and a retainer, and as described above, nothing in the hypothetical combination of Ledford in view of Tisone, et al teaches or suggests this subject matter.


In view of the above amendments and remarks, therefore, all the claim should be in condition for allowance.

It is believed that all of the pending claims have been addressed in this paper. However, failure to address a specific rejection, issue or comment, does not signify agreement with or concession of that rejection, issue or comment. In addition, because the arguments made above are not intended to be exhaustive, there may be reasons for patentability of any or all pending claims (or other claims) that have not been expressed. Finally, nothing in this paper should be construed as an intent to concede any issue with regard to any claim, except as specifically stated in this paper, and the amendment of any claim does not necessarily signify concession of unpatentability of the claim prior to its amendment.

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Applicant asks that all claims be allowed. Please apply a one-month petition for extension of time fee and any other charges or credits to Deposit Account No. 06-1050.

Respectfully submitted,

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